PERFORMANCE EXAM CHECK LIST
DETERMINING THE PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS
AASHTO T-90

Participant Name: _____ Exam Date: _____

Record the symbols "P" for passing or "F" for failing on each step of the checklist:

Procedure Elements:		**Trial#1**	**Trial#2**
1.	**Inspect and clean apparatus.** Apparatus include mixing dish, spatula, rolling surface, moisture containers with lids, balance readable to 0.01g and a drying oven. All apparatus should be clean dry and within specifications. Moisture containers and their lids will be weighed and recorded before each test.	_____	_____
2.	**Prepare sample .** As per AASHTO T-87 or AASHTO T-146. This test requires approximately 20g of material. Material for this test can be obtained from material used for AASHTO T-89.	_____	_____
3.	**Adjustment of moisture content.** Moisture content shall be such that the material can be shaped into a ball and is not sticky. Use distilled or demineralized water only.	_____	_____
4.	**Roll sample to 3.0 mm (approx. 1/8").** Take approximately 8g of the 20g sample and separate into1.5– 2.0 gram increments. Roll on a ground surface with just enough pressure to make a thread of uniform diameter for it's entire length. A rolling rate of 80 to 90 strokes/minute shall be used. When the diameter of the thread becomes 3.0 mm (approx. 1/8") break thread into 6 to 8 pieces then make a ball and repeat process. There is a 2 minute time to get from a ball down to 3.0 mm (approx. 1/8").	_____	_____
5.	**Re-roll until thread breaks or crumbles.** Repeat step # 4 until thread breaks into a series of segments 6.4 mm (1/4") to 9.5 mm (3/8") in length. The sample must be rolled to 3.0 mm (1/8") at least once before it breaks or crumbles, if failure occurs on the first try add moisture and repeat steps. Do not attempt to produce failure at 3.0 mm (1/8") in diameter.	_____	_____
6.	**Collect crumbled particles.** Using the spatula, gather all portions of the crumbled particles into a suitable container, **cover immediately** and determine the mass to the nearest 0.01g.	_____	_____
7.	**Remove cover and place in oven at 110±5° C (230±9° F) and dry to constant mass.** When removing sample from the drying oven **cover immediately.**	_____	_____
8.	**Determine moisture content.** After drying to a constant mass, cool and determine the mass to the nearest 0.01g and calculate moisture content to the nearest 0.1%.	_____	_____
9.	**Report Plastic Limit.** Plastic Limit is recorded as the nearest whole number .	_____	_____
10.	**Determine Plasticity Index (PI).** Calculate the Plasticity Index of the soil as the difference between its Liquid Limit and its Plastic Limit. Example: LL – PL = PI, the result is reported to the nearest whole number.	_____	_____

COMMENTS: First Attempt : Pass ☐ Fail ☐ Second Attempt: Pass ☐ Fail ☐

Examiner Signature:_____ **Sampler / Tester Qualification #** _____

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